Remarks

The Final Office Action mailed June 15, 2004 has been received and reviewed. Claims 1 and 9 having been amended, and claims 4-5, 12-13, 16, and 18 having been canceled, the pending claims are claims 1-3, 6-11, 14-15, 17, and 19-22. Reconsideration and withdrawal of the rejections are respectfully requested.

The amendment of claims 1 and 9 is supported by the language of originally filed claims 4 and 12, for example. Because claims 4 and 12 were previously presented, these amendments do not raise new issues.

Affirmation of Provisional Election

An election to prosecute claims 1-8 and 17-22, Group I, was made in a Response to Restriction Requirement filed with the Patent Office on September 29, 2003.

Applicant's Representatives ask that the Examiner reconsider the restriction, especially with respect to Group II (claims 9-15). Both Groups are drawn to an NMR method of identifying a binding site, classified in class 324, subclass 307. Although the Group I claims do not require obtaining a quantum correlation spectrum as required by the Group II claims, they do not exclude it.

Applicant's Representatives submit that the inventions as claimed can be readily evaluated in one search without placing undue burden on the Examiner. Applicant reserves the right to pursue examination of the non-elected claims in continuation or divisional applications.

The 35 U.S.C. §103 Rejection

The Examiner rejected claims 1-4, 6-8, 17, and 19-22 under 35 U.S.C. §103(a) as being unpatentable over **Veeraraghavan et al.**, "Structural Correlates for Enhanced Stability in the E2 DNA-Binding Domain from Bovine Papillomavirus," *Biochemistry*, 1999;*38*(49):16115-16124, or **Veeraraghavan et al.**, "^{1}H, ^{15}N, and ^{13}C NMR Resonance

Assignments for the DNA-Binding Domain of the BPV-1 E2 Protein," *Journal of Biomolecular NMR*, 1998;*11*(4):457-458, or **Hajduk et al.**, "NMR-Based Discovery of Lead Inhibitors That Block DNA Binding of the Human Papillomavirus E2 Protein," *J. Med. Chem.*, 1997;*40*(20):3144-3150. These rejections are traversed.

The cited art does not teach or suggest the recited method that allows for identification of a ligand binding site in a DNA-binding and dimerization domain of an HPV-18 strain of papillomavirus E2 protein. This is significant in that it distinguishes ligand binding, particularly DNA binding, from both nonspecific binding and binding of the protein to itself (dimerization). The information listed in Table 1 (or illustrated in Figure 2) is not "nonfunctional descriptive material which does not distinguish the invention from the prior art" as alleged by the Examiner. Rather, this information was identified as being indicative of a ligand binding site, as opposed to other sites, particularly a dimerization site (i.e., a binding site of the protein to itself). There is no teaching or suggestion in the cited documents of the selection of this correlative NMR information for an HPV-18 strain of papillomavirus E2 protein. Therefore, this information does distinguish the invention from the prior art.

Summary

It is respectfully submitted that the pending claims 1-3, 6-11, 14-15, 17, and 19-22 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicant's Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for
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August 16, 2004
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CERTIFICATE UNDER 37 CFR §1.8:
The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 16th day of AUGUST, 2004, at 12:30 PM (Central Time).

By: Ann Ch
Name: SAM HER